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(FILE 'USPAT' ENTERED AT 14:10:54 ON 13 JUN 1999)
L1      21348 S DISPLAY (P) LIMITED
L2      5546 S DISPLAY (P) PARTIAL
L3      40083 S DISPLAY (P) AREA
L4      15951 S CONTENT (P) VIEW?
L5      6523 S CONFIG? (P) GRAPHIC?
L6      1946 S TEMPOR? (P) GRAPHIC?
L7      51 S S LOAD? (P) DISPLAY
L8      21412 S LOAD? (P) DISPLAY
L9      1320 S L1 AND L2
L10     25574 S L1 OR L2
L11     9696 S L10 AND L3
L12     343 S L11 AND L4
L13     22281 S L4 OR L5
L14     330 S L6 AND L8
L15     44 S L14 AND L13 AND L11
L16     913 S BROWSER
L17     0 S L16 AND L15
L18     178 S HYPERMEDIA
L19     0 S L18 AND L15
L20     110308 S WEB
L21     0 S L20 AND L15
L22     6 S L16 AND L14
L23     0 S L18 AND L14
L24     5 S L20 AND L14
L25     3593 S INTERNET
L26     12 S L25 AND L14
L27     1 S L25 AND L15
L28     163797 S WINDOW?
L29     16 S L22 OR L24 OR L26
L30     13 S L29 AND L28
L31     1 S L30 AND L27
L32     124 S L14 AND L13
L33     10 S L32 AND L29
L34     8 S L33 AND L28
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=> d 1-

1. 5,910,876, Jun. 8, 1999, Printed circuit board having conductors which can be decoupled for isolating inactive integrated circuits connected thereto; Dinesh Sharma, et al., 361/86; 307/86, 130; 361/92; 365/229 [IMAGE AVAILABLE]

2. 5,857,074, Jan. 5, 1999, Server controller responsive to various communication protocols for allowing remote communication to a host computer connected thereto; Derrick W. Johnson, 709/217; 395/200.6; 709/230 [IMAGE AVAILABLE]

3. 5,852,720, Dec. 22, 1998, System for storing display data during first time period prior to failure of computer and during second time period after reset of the computer; R. Scott Gready, et al., 709/217 [IMAGE AVAILABLE]

4. 5,809,242, Sep. 15, 1998, Electronic mail system for displaying advertisement at local computer received from remote system while the

local computer is off-line the remote system; David E. Shaw, et al.,  
709/217 [IMAGE AVAILABLE]

5. 5,802,492, Sep. 1, 1998, Computer aided routing and positioning  
system; David M. DeLorme, et al., 455/456; 340/990, 995; 701/201, 208,  
211, 213 [IMAGE AVAILABLE]

6. 5,796,566, Aug. 18, 1998, Printed circuit board having conductors  
which can be decoupled for isolating inactive integrated circuits  
connected thereto; Dinesh Sharma, et al., 361/86; 307/66, 86, 130;  
361/92; 365/229 [IMAGE AVAILABLE]

7. 5,621,864, Apr. 15, 1997, Label generation apparatus; Daniel A.  
Benade, et al., 395/117; 707/500 [IMAGE AVAILABLE]

8. 5,574,934, Nov. 12, 1996, Preemptive priority-based transmission of  
signals using virtual channels; Mojtaba Mirashrafi, et al., 709/207;  
340/825.16, 825.5; 348/12, 15; 364/231.4, 241.2, DIG.1, DIG.2; 370/462;  
707/526; 709/231; 712/220 [IMAGE AVAILABLE]

=> d ab 1-

US PAT NO: 5,910,876 [IMAGE AVAILABLE]

L34: 1 of 8

ABSTRACT:

A printed circuit board includes an edge connector operable to be coupled to an expansion bus. An integrated circuit is mounted on the printed circuit board and is coupled to the edge connector. The integrated circuit is operable to snoop memory operations on the expansion bus and cause selected memory data to be stored in a memory on the printed circuit board. A first power conductor extends across a first portion of the printed circuit board and is coupled to the integrated circuit. A second power conductor extends across a second portion of the printed circuit board and is also coupled to the integrated circuit. The circuit board also includes a decoupling unit connected between the first power conductor and the second power conductor. The decoupling unit causes disconnect of the first power conductor from the second power conductor during times in which voltage within the first power conductor is less than voltage within the second power conductor.

US PAT NO: 5,857,074 [IMAGE AVAILABLE]

L34: 2 of 8

ABSTRACT:

A communication system is presented whereby sequences of video screens sent from a host CPU to a video controller can be stored and subsequently retrieved by a terminal located remote from the host CPU. The host CPU and video controller form part of a server arranged within a distributed computing system. An administrator situated at the remote terminal can retrieve select video screens produced during server operations to determine information regarding the server configuration and possible causes of server failure or future failure. The sequence of video screens thereby represent video screen changes stored upon a server controller adapted for coupling to the server expansion bus. The video screen changes represent a sequence of video screen changes occurring prior to server failure or after server reset. Those changes provide beneficial information to an administrator located remote from the server, and allows the administrator to communicate with the server using several possible communication protocols. The server controller snoops display data written from the host CPU to the video controller and mirrors the display data upon buffers within the server controller. Information within the buffers can be called upon by a remotely situated administrator regardless of whether server power is lost in the interim.

US PAT NO: 5,852,720 [IMAGE AVAILABLE]

L34: 3 of 8

ABSTRACT:

A communication system is presented whereby sequences of video screens sent from a host CPU to a video controller can be stored and subsequently retrieved by a terminal located remote from the host CPU. The host CPU and video controller form part of a server arranged within a distributed computing system. An administrator situated at the remote terminal can retrieve select video screens produced during server operations to determine information regarding the server configuration and possible causes of server failure or future failure. The sequence of video screens thereby represent video screen changes stored upon a server controller adapted for coupling to the server expansion bus. The video screen changes represent a sequence of video screen changes occurring prior to server failure or after server reset. Those changes provide beneficial information to an administrator located remote from the server, and allows the administrator to communicate with the server using several possible communication protocols. The server controller snoops display data written from the host CPU to the video controller and mirrors the display data upon buffers within the server controller. Information within the buffers can be called upon by a remotely situated administrator regardless of whether server power is lost in the interim.

US PAT NO: 5,809,242 [IMAGE AVAILABLE]

L34: 4 of 8

ABSTRACT:

A system for providing scheduled messages to a remote user in a batch oriented system. In a preferred embodiment of the present invention, a user creates and/or reads electronic mail locally. While the user creates the electronic mail, a message is displayed to the user on a portion of the local monitor, the message preferably changing in accordance with a local display schedule and stored on a local storage device. The message is preferably targeted to the particular user. When the user is ready to transmit the e-mail created and/or receive e-mail addressed to him, the user's local client establishes a connection via a modem with a remote e-mail server system. The remote e-mail server system not only receives the e-mail transmitted by the user and/or transmits e-mail addressed to the user, but also updates the user's local messages in accordance with a distribution schedule. After the e-mail and message updates are transmitted, the user's local client computer is disconnected from the remote e-mail server system.

US PAT NO: 5,802,492 [IMAGE AVAILABLE]

L34: 5 of 8

ABSTRACT:

A Computer Aided Routing and Positioning System (CARPS) determines a route along selected waypoints that include a travel origin and a travel destination and intermediate waypoints therebetween. The selected waypoints may be uploaded to or downloaded from various geocoding devices that utilize the Global Positioning System (GPS). A CARPS database incorporates travel information selected from a range of multimedia sources about the transportation routes, waypoints, and geographically locatable points of interest (POIs) selected by the user along the travel route. The CARPS software permits user selection of specified POI types within a user-defined region of interest and user selection of particular POIs from the selected types within the region of interest. The transportation routes, waypoints, POIs and region of interest are identifiable in the computer by coordinate locations of a selected geographical coordinate system. The CARPS software is constructed to present a user-customized travel log for preview on the computer display of the user-defined travel route. The travel planner can preview on the computer display a multimedia travel log particularly customized for the user-defined travel route including multimedia information on the transportation routes, waypoints, and POIs selected by the user. The user can engage in an iterative trip planning process of revising the route and previewing travel logs of revised travel routes until a satisfactory

travel route is determined. Hardcopies of customized travel maps of the user-defined travel route can be used in conjunction with a GPS device which has been uploaded with selected waypoint data.

US PAT NO: 5,796,566 [IMAGE AVAILABLE]

L34: 6 of 8

ABSTRACT:

A communication system is presented whereby sequences of video screens sent from a host CPU to a video controller can be stored and subsequently retrieved by a terminal located remote from the host CPU. Detection logic, controller memory, processor and a communication unit are compiled as a system configured upon a PCB. The PCB is configured to maintain certain vital functions even if power supplied from an expansion bus ceases. The PCB may employ a battery which maintains processor and controller memory activities and communication therebetween for a period of time sufficient to sustain video screen information stored within the controller memory. Thus, decoupling circuitry is present which prevents drain upon the battery if the communication unit is not being used. The decoupling unit separates power and signal conductors between portions of the printed circuit board. A power status signal is indicative of the voltage level within power conductors of one portion relative to a voltage level within power conductors of another portion to effectuate decoupling therebetween.

US PAT NO: 5,621,864 [IMAGE AVAILABLE]

L34: 7 of 8

ABSTRACT:

The label generation apparatus of this invention enables the user to define a label of various sizes, shapes and characteristics, wherein each label in a series of labels includes unique indicia that individually identify each label according to any predefined sequence. These labels also contain template fields that vary according to the indicia printed thereon or any other predefined ordering. The label generation apparatus includes a template generation capability that enables the user to define a label format having one or more writable indicia fields. These one or more writable indicia fields can be used to provide each label with individual identifying indicia according to any predetermined sequence. The label generation apparatus also includes an indicia generation capability that produces the individual identification according to various characteristics that are specified by the user of this apparatus.

US PAT NO: 5,574,934 [IMAGE AVAILABLE]

L34: 8 of 8

ABSTRACT:

A computer system for transmitting two or more types of signals. Each type of signal is assigned a priority level. Signals of a particular type are transmitted as they become ready for transmission, unless signals of a different type having a greater priority become ready for transmission. In that case, the transmission of the low-priority signals is interrupted to allow transmission of the high-priority signals. The transmission of the low-priority signals is resumed after the transmission of the high-priority signals is complete. In a preferred embodiment directed to conferencing systems, audio signals are assigned higher priorities than video, data, and control signals in order to provide a high-quality to the audio portion of a conferencing session.

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L31     1 S L30 AND L27
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1. 5,910,876, Jun. 8, 1999, Printed circuit board having conductors which can be decoupled for isolating inactive integrated circuits connected thereto; Dinesh Sharma, et al., 361/86; 307/86, 130; 361/92; 365/229 [IMAGE AVAILABLE]
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3. 5,852,720, Dec. 22, 1998, System for storing display data during first time period prior to failure of computer and during second time period after reset of the computer; R. Scott Gready, et al., 709/217 [IMAGE AVAILABLE]
4. 5,831,631, Nov. 3, 1998, Method and apparatus for improved information visualization; John Light, et al., 345/440 [IMAGE AVAILABLE]
5. 5,825,363, Oct. 20, 1998, Method and apparatus for determining visible surfaces; Michael D. Anderson, 345/422 [IMAGE AVAILABLE]

6. 5,809,242, Sep. 1, 1998, Electronic mail system for displaying advertisement at local computer received from remote system while the local computer is off-line the remote system; David E. Shaw, et al., 709/217 [IMAGE AVAILABLE]
7. 5,802,492, Sep. 1, 1998, Computer aided routing and positioning system; David M. DeLorme, et al., 455/456; 340/990, 995; 701/201, 208, 211, 213 [IMAGE AVAILABLE]
8. 5,796,566, Aug. 18, 1998, Printed circuit board having conductors which can be decoupled for isolating inactive integrated circuits connected thereto; Dinesh Sharma, et al., 361/86; 307/66, 86, 130; 361/92; 365/229 [IMAGE AVAILABLE]
9. 5,774,666, Jun. 30, 1998, System and method for displaying uniform network resource locators embedded in time-based medium; Michael J. Portuesi, 709/218; 348/473; 709/219 [IMAGE AVAILABLE]
10. 5,731,813, Mar. 24, 1998, Graphical user interface for graphically representing, organizing, and selecting application programs and documents; Thomas C. O'Rourke, et al., 345/349, 339, 351, 356; 709/302 [IMAGE AVAILABLE]
11. 5,621,864, Apr. 15, 1997, Label generation apparatus; Daniel A. Benade, et al., 395/117; 707/500 [IMAGE AVAILABLE]
12. 5,574,934, Nov. 12, 1996, Preemptive priority-based transmission of signals using virtual channels; Mojtaba Mirashrafi, et al., 709/207; 340/825.16, 825.5; 348/12, 15; 364/231.4, 241.2, DIG.1, DIG.2; 370/462; 707/526; 709/231; 712/220 [IMAGE AVAILABLE]
13. 5,349,658, Sep. 20, 1994, Graphical user interface; Thomas C. O'Rourke, et al., 345/349, 351, 356, 357; 364/241.9, 927.63, DIG.1, DIG.2 [IMAGE AVAILABLE]

=> d ab 1-

US PAT NO: 5,802,492 [IMAGE AVAILABLE]

L31: 1 of 1

ABSTRACT:

A Computer Aided Routing and Positioning System (CARPS) determines a route along selected waypoints that include a travel origin and a travel destination and intermediate waypoints therebetween. The selected waypoints may be uploaded to or downloaded from various geocoding devices that utilize the Global Positioning System (GPS). A CARPS database incorporates travel information selected from a range of multimedia sources about the transportation routes, waypoints, and geographically locatable points of interest (POIs) selected by the user along the travel route. The CARPS software permits user selection of specified POI types within a user-defined region of interest and user selection of particular POIs from the selected types within the region of interest. The transportation routes, waypoints, POIs and region of interest are identifiable in the computer by coordinate locations of a selected geographical coordinate system. The CARPS software is constructed to present a user-customized travel log for preview on the computer display of the user-defined travel route. The travel planner can preview on the computer display a multimedia travel log particularly customized for the user-defined travel route including multimedia information on the transportation routes, waypoints, and POIs selected by the user. The user can engage in an iterative trip planning process of revising the route and previewing travel logs of revised travel routes until a satisfactory travel route is determined. Hardcopies of customized travel maps of the user-defined travel route can be used in conjunction with a GPS device

US PAT NO: 5,910,876 [IMAGE AVAILABLE]

L30: 1 of 13

ABSTRACT:

A printed circuit board includes an edge connector operable to be coupled to an expansion bus. An integrated circuit is mounted on the printed circuit board and is coupled to the edge connector. The integrated circuit is operable to snoop memory operations on the expansion bus and cause selected memory data to be stored in a memory on the printed circuit board. A first power conductor extends across a first portion of the printed circuit board and is coupled to the integrated circuit. A second power conductor extends across a second portion of the printed circuit board and is also coupled to the integrated circuit. The circuit board also includes a decoupling unit connected between the first power conductor and the second power conductor. The decoupling unit causes disconnect of the first power conductor from the second power conductor during times in which voltage within the first power conductor is less than voltage within the second power conductor.

US PAT NO: 5,857,074 [IMAGE AVAILABLE]

L30: 2 of 13

ABSTRACT:

A communication system is presented whereby sequences of video screens sent from a host CPU to a video controller can be stored and subsequently retrieved by a terminal located remote from the host CPU. The host CPU and video controller form part of a server arranged within a distributed computing system. An administrator situated at the remote terminal can retrieve select video screens produced during server operations to determine information regarding the server configuration and possible causes of server failure or future failure. The sequence of video screens thereby represent video screen changes stored upon a server controller adapted for coupling to the server expansion bus. The video screen changes represent a sequence of video screen changes occurring prior to server failure or after server reset. Those changes provide beneficial information to an administrator located remote from the server, and allows the administrator to communicate with the server using several possible communication protocols. The server controller snoops display data written from the host CPU to the video controller and mirrors the display data upon buffers within the server controller. Information within the buffers can be called upon by a remotely situated administrator regardless of whether server power is lost in the interim.

US PAT NO: 5,852,720 [IMAGE AVAILABLE]

L30: 3 of 13

ABSTRACT:

A communication system is presented whereby sequences of video screens sent from a host CPU to a video controller can be stored and subsequently retrieved by a terminal located remote from the host CPU. The host CPU and video controller form part of a server arranged within a distributed computing system. An administrator situated at the remote terminal can retrieve select video screens produced during server operations to determine information regarding the server configuration and possible causes of server failure or future failure. The sequence of video screens thereby represent video screen changes stored upon a server controller adapted for coupling to the server expansion bus. The video screen changes represent a sequence of video screen changes occurring prior to server failure or after server reset. Those changes provide beneficial information to an administrator located remote from the server, and allows the administrator to communicate with the server using several possible communication protocols. The server controller snoops display data written from the host CPU to the video controller and mirrors the

display data upon buffers within the server controller. Information within the buffers can be called upon by a remotely situated administrator regardless of whether server power is lost in the interim.

US PAT NO: 5,831,631 [IMAGE AVAILABLE]

L30: 4 of 13

ABSTRACT:

An information handling system with a display device, and a software program for controlling the information handling system to process an information file to produce qualitative measurements of multiple attributes of the information file, and to generate an iconic graph with preselected dimensions for visually representing and displaying the qualitative measurements on the display device.

US PAT NO: 5,825,363 [IMAGE AVAILABLE]

L30: 5 of 13

ABSTRACT:

A system for rendering a three-dimensional scene by determining each visible surface of geometric shapes for a sequence of frames. For a selected frame, a working frame buffer is initialized by copying background data maintained in a background frame buffer to the working frame buffer. A working Z buffer is initialized by copying background depth data of the background Z buffer to the working Z buffer. The background data is represented by a bitmap defining values for pixels of a background remaining constant for the frame sequence. The background depth data is represented by depth values defining distances between a view point reference and the geometric shapes at the pixels of the selected frame. For a selected geometric shape, a pixel is selected from a set of pixels for the frame. This set of pixels is defined by an intersection between the view point reference and the selected geometric shape. A determination is then made whether the selected geometric shape obscures another geometric shape at the selected pixel. If so, a value of the selected pixel is obtained and stored within the working frame buffer. In addition, a depth value defined by a distance between the view point reference and the selected geometric shape is stored within the working Z buffer. These steps are completed for each remaining pixel within the set of pixels and, in turn, this process is completed for each remaining geometric shape.

US PAT NO: 5,809,242 [IMAGE AVAILABLE]

L30: 6 of 13

ABSTRACT:

A system for providing scheduled messages to a remote user in a batch oriented system. In a preferred embodiment of the present invention, a user creates and/or reads electronic mail locally. While the user creates the electronic mail, a message is displayed to the user on a portion of the local monitor, the message preferably changing in accordance with a local display schedule and stored on a local storage device. The message is preferably targeted to the particular user. When the user is ready to transmit the e-mail created and/or receive e-mail addressed to him, the user's local client establishes a connection via a modem with a remote e-mail server system. The remote e-mail server system not only receives the e-mail transmitted by the user and/or transmits e-mail addressed to the user, but also updates the user's local messages in accordance with a distribution schedule. After the e-mail and message updates are transmitted, the user's local client computer is disconnected from the remote e-mail server system.

US PAT NO: 5,802,492 [IMAGE AVAILABLE]

L30: 7 of 13

ABSTRACT:

A Computer Aided Routing and Positioning System (CARPS) determines a route along selected waypoints that include a travel origin and a travel destination and intermediate waypoints therebetween. The selected waypoints may be uploaded to or downloaded from various geocoding devices



that utilize the Global Positioning System (GPS). A CARPS database incorporates travel information selected from a range of multimedia sources about the transportation routes, waypoints, and geographically locatable points of interest (POIs) selected by the user along the travel route. The CARPS software permits user selection of specified POI types within a user-defined region of interest and user selection of particular POIs from the selected types within the region of interest. The transportation routes, waypoints, POIs and region of interest are identifiable in the computer by coordinate locations of a selected geographical coordinate system. The CARPS software is constructed to present a user-customized travelog for preview on the computer display of the user-defined travel route. The travel planner can preview on the computer display a multimedia travelog particularly customized for the user-defined travel route including multimedia information on the transportation routes, waypoints, and POIs selected by the user. The user can engage in an iterative trip planning process of revising the route and previewing travelogs of revised travel routes until a satisfactory travel route is determined. Hardcopies of customized travel maps of the user-defined travel route can be used in conjunction with a GPS device which has been uploaded with selected waypoint data.

US PAT NO: 5,796,566 [IMAGE AVAILABLE]

L30: 8 of 13

ABSTRACT:

A communication system is presented whereby sequences of video screens sent from a host CPU to a video controller can be stored and subsequently retrieved by a terminal located remote from the host CPU. Detection logic, controller memory, processor and a communication unit are compiled as a system configured upon a PCB. The PCB is configured to maintain certain vital functions even if power supplied from an expansion bus ceases. The PCB may employ a battery which maintains processor and controller memory activities and communication therebetween for a period of time sufficient to sustain video screen information stored within the controller memory. Thus, decoupling circuitry is present which prevents drain upon the battery if the communication unit is not being used. The decoupling unit separates power and signal conductors between portions of the printed circuit board. A power status signal is indicative of the voltage level within power conductors of one portion relative to a voltage level within power conductors of another portion to effectuate decoupling therebetween.

US PAT NO: 5,774,666 [IMAGE AVAILABLE]

L30: 9 of 13

ABSTRACT:

A system and method are provided for displaying a uniform network resource locator embedded in a time-based medium. In one embodiment, the time-based medium can be a movie file having an uniform network resource locator embedded by association with a track in the movie file. In another embodiment, the time-based medium can be a video signal having encoded information defining an embedded uniform network resource locator. An output for display is generated based upon the time-based medium where display of the output shows the embedded uniform network resource locator to a user such that the embedded uniform network resource locator is active during display of the output. The user is then allowed to activate the embedded uniform network resource locator. In response to activation by the user, the embedded uniform network resource locator is followed to retrieve a resource addressed by the embedded uniform network resource locator.

US PAT NO: 5,731,813 [IMAGE AVAILABLE]

L30: 10 of 13

ABSTRACT:

A graphical user interface for a computer system that includes a memory for storing application programs and application files. The user interface permits the user to initiate execution of a selected

application program, and produces a snapshot that graphically represents a screen produced during the execution of the application program. The snapshot may be displayed after execution of the application program is terminated, and provides a visual reference for the application file that was opened when the snapshot was taken. Snapshots and their corresponding application files may be organized in a project format, and new documents opened by an application program may be automatically placed in the opened project. The user interface provides an improved technique for initiating execution of application programs.

US PAT NO: 5,621,864 [IMAGE AVAILABLE]

L30: 11 of 13

ABSTRACT:

The label generation apparatus of this invention enables the user to define a label of various sizes, shapes and characteristics, wherein each label in a series of labels includes unique indicia that individually identify each label according to any predefined sequence. These labels also contain template fields that vary according to the indicia printed thereon or any other predefined ordering. The label generation apparatus includes a template generation capability that enables the user to define a label format having one or more writable indicia fields. These one or more writable indicia fields can be used to provide each label with individual identifying indicia according to any predetermined sequence. The label generation apparatus also includes an indicia generation capability that produces the individual identification according to various characteristics that are specified by the user of this apparatus.

US PAT NO: 5,574,934 [IMAGE AVAILABLE]

L30: 12 of 13

ABSTRACT:

A computer system for transmitting two or more types of signals. Each type of signal is assigned a priority level. Signals of a particular type are transmitted as they become ready for transmission, unless signals of a different type having a greater priority become ready for transmission. In that case, the transmission of the low-priority signals is interrupted to allow transmission of the high-priority signals. The transmission of the low-priority signals is resumed after the transmission of the high-priority signals is complete. In a preferred embodiment directed to conferencing systems, audio signals are assigned higher priorities than video, data, and control signals in order to provide a high-quality to the audio portion of a conferencing session.

US PAT NO: 5,349,658 [IMAGE AVAILABLE]

L30: 13 of 13

ABSTRACT:

A graphical user interface for a computer system that includes a memory for storing application programs and application files. The user interface permits the user to initiate execution of a selected application program, and produces a snapshot that graphically represents a screen produced during the execution of the application program. The snapshot may be displayed after execution of the application program is terminated, and provides a visual reference for the application file that was opened when the snapshot was taken. Snapshots and their corresponding application files may be organized in a project format, and new documents opened by an application program may be automatically placed in the opened project. An improved technique for initiating the execution of application programs is also described.

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L12 343 S L11 AND L4  
L13 22281 S L4 OR L5  
L14 330 S L6 AND L8  
L15 44 S L14 AND L13 AND L11  
L16 913 S BROWSER  
L17 0 S L16 AND L15  
L18 178 S HYPERMEDIA  
L19 0 S L18 AND L15  
L20 110308 S WEB  
L21 0 S L20 AND L15  
L22 6 S L16 AND L14  
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L31 1 S L30 AND L27

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7. 5,802,492, Sep. 1, 1998, Computer aided routing and positioning system; David M. DeLorme, et al., 455/456; 340/990, 995; 701/201, 208, 211, 213 [IMAGE AVAILABLE]

8. 5,796,566, Aug. 18, 1998, Printed circuit board having conductors which can be decoupled for isolating inactive integrated circuits connected thereto; Dinesh Sharma, et al., 361/86; 307/66, 86, 130; 361/92; 365/229 [IMAGE AVAILABLE]

9. 5,774,666, Jun. 30, 1998, System and method for displaying uniform network resource locators embedded in time-based medium; Michael J. Portuesi, 709/218; 348/473; 709/219 [IMAGE AVAILABLE]

10. 5,731,813, Mar. 24, 1998, Graphical user interface for graphically representing, organizing, and selecting application programs and documents; Thomas C. O'Rourke, et al., 345/349, 339, 351, 356; 709/302 [IMAGE AVAILABLE]

11. 5,621,864, Apr. 15, 1997, Label generation apparatus; Daniel A. Benade, et al., 395/117; 707/500 [IMAGE AVAILABLE]

12. 5,574,934, Nov. 12, 1996, Preemptive priority-based transmission of signals using virtual channels; Mojtaba Mirashrafi, et al., 709/207; 340/825.16, 825.5; 348/12, 15; 364/231.4, 241.2, DIG.1, DIG.2; 370/462; 707/526; 709/231; 712/220 [IMAGE AVAILABLE]

13. 5,349,658, Sep. 20, 1994, Graphical user interface; Thomas C. O'Rourke, et al., 345/349, 351, 356, 357; 364/241.9, 927.63, DIG.1, DIG.2 [IMAGE AVAILABLE]

=>d 131 1-

1. 5,802,492, Sep. 1, 1998, Computer aided routing and positioning system; David M. DeLorme, et al., 455/456; 340/990, 995; 701/201, 208, 211, 213 [IMAGE AVAILABLE]

=> d kwic 1-

US PAT NO: 5,802,492 [IMAGE AVAILABLE]

L31: 1 of 1

SUMMARY:

BSUM(3)

The . . . hybrid location systems. For example, the GPS satellite system is used with a GPS receiver for displaying waypoint data and **limited** routing data of the CARPS user on the computer **display** for correlation of location with surface features or mappable features. Data generated by the GPS receiver may be used for "real time position updates" in the CARPS computer **display** or may be recorded by the GPS receiver in the field for subsequent downloading to CARPS software and CARPS computer **display**. As well, CARPS-generated data may be used within the GPS receiver by a CARPS user for guidance in the field. . .

SUMMARY:

BSUM(9)

Relatedly, . . . corporation of Lenexa, Kans. under the tradename Garmin GPS 45. The Garmin navigation tool incorporates a GPS receiver and a **limited** character **display** screen for displaying position information in alphanumeric and graphic characters. Another such system is a hand-held personal GPS navigation tool. . . . Austin, Tex., under the trademark Scout GPS (TM). The Trimble navigation tool incorporates a GPS receiver and a four-line character **display** for displaying position information in alphanumeric characters. This hand-held GPS system can apparently **display** alphanumeric position information in a latitude/longitude coordinate system or a Universal Transverse Mercator (UTM) coordinate system. The Trimble navigation tool can apparently also **display** proprietary coordinate system information for locating the position of a user on a standard topographic map. The Trimble GPS navigation. . . .

SUMMARY:

BSUM(10)

A disadvantage of the Trimble GPS navigation tool is that it provides a **display** of coordinate system data only in alphanumeric characters on a multiline LCD **display**. The user must then perform mathematical measurements and operations to determine the user location on a particular topographic map. While. . . . device does not provide communications access to other geographical information databases for updated information on geographical objects in the spatial **area** of interest or communications access to other software tools for map analysis and reading. More generally, the Trimble navigation device. . . .

SUMMARY:

BSUM(17)

A . . . and intuitive methods. As well, the GPS satellite system may be used in the field for recording waypoint data and **limited** routing data of a CARPS user for later data transfer and CARPS computer **display**. Additionally, the GPS satellite system may be used in the field for updating waypoint data and **limited** routing data of a CARPS user for immediate data transfer via wireless data communications and remote CARPS computer **display** at a CARPS desktop platform.

SUMMARY:

BSUM(48)

According . . . systems and hybrid location systems may also be used. The database manager is constructed for displaying on the CARPS computer **display** the location, direction of travel, speed and traveling route of the CARPS user. The displayed location and route can be correlated with locations on the printed map coinciding in geographic **area** with the selected grid quadrangle. The GPS receiver **loaded** with CARPS data can be used in a separate and independent CARPS system without any databases of loc/objects as a stand-alone system or in combination with the second database and other available internal and external databases for **display** of selected loc/objects from such databases. CARPS and users can exchange data for **display** or other use such as user location information as well as other spatially related data. This is accomplished over a. . . .

DETDESC:

DETD(2)

CARPS . . . . . hard drive or central server (e.g. a local area network internally linked to mainframe or externally linked to the Internet).

DETDESC:

DETD(7)

The . . . . . shortest, fastest or otherwise optimized routes calculated, as described in more detail below. At the same time, in a multimedia **window** 120 superimposed upon the map display, the user 103 is engaged in viewing, hearing, or responding to a selectable, multimedia. . . .

DETDESC:

DETD(9)

From . . . . . of the invention as an episode in a multimedia presentation comprised of graphics or text, shown in an on screen **window** 120, or audio output conveyed to the user 103 via a speaker 107 or earphones 108. For example, in the multimedia **window** 120, the user 103 can view and selectively respond to color photographic or video images or related textual information about. . . .

DETDESC:

DETD(11)

The . . . . . illustrated by the graphic image of a view of the lake, sailboat and mountains on the far shore, in the **window** 120, accompanied by related audio output 107 or 108. CARPS 100, enables a user to prompt a multimedia presentation 120. . . .

DETDESC:

DETD(13)

For example, in FIG. 1A, mouse manipulable buttons along the bottom of the multimedia **window** 120 enable the user 103 to command CARPS 100 to include the lakeside location 124, based on the multimedia presentation. . . .

DETDESC:

DETD(14)

Output . . . . . highlighted upon an electronic or digital map display 122. Next the user prompted the presentation of multimedia information in a **window** 120 concerning the lakeside point of interest. Prompted by the multimedia presentation, the user then pushed the "Attach" button in the command bar across the **window** bottom, or otherwise prompted CARPS to include the lakeside location as an annotated point of interest within a specified distance. . . .

DETDESC:

DETD(19)

FIG. 1B reveals the basic user interface, including a map **display**, and diverse user options for manipulating the electronic maps. Three buttons with diagonal arrows in a row at 130 enable. . . . or out among map scales. Nine buttons in the form of a compass rose at 131 cause the electronic map **display** to shift or pan to center on a new latitude and longitude. At 134, an overview screen shows the **area** depicted on the main map in a rectangle in relation to surrounding geography. Mouse

clicks in the rectangle further enable. . .

DETDESC:

DETD(21)

FIGS. . . . at 136 prompt the dialog boxes for "Locate Place Name" at 137, "Locate Zip Code" in FIG. 1E and "Locate Area Code and Exchange" in FIG. 1F. This suite of locating tools facilitates searching lists by the names of places or cities and respective states or provinces as well as locating specified places by recentering the map **display** upon the identified location.

DETDESC:

DETD(23)

FIGS. . . . or series of presentations as shown at 151 in FIG. 1K. Controls along the bottom of the 151 picture display **window** on Burlington facilitate user control and selection of multimedia content and form, as described hereafter. In FIG. 1J, the Attach. . .

DETDESC:

DETD(24)

FIG. . . . to the relevant place name, as shown for Shelburne at 157. The Campground information box at 159 shows a typical **display** of Full Info requested by the user concerning the Shelburne Camping Area.

DETDESC:

DETD(26)

FIGS. . . . up a list box for tourist attractions situated in Seattle as shown towards the bottom of the Points of Interest **window** for Seattle at 162. As shown in the middle of the **window** at 162, the user can scroll through text information concerning selected attractions, such as the Museum of Flight. The user. . .

DETDESC:

DETD(33)

Based on user-optimized route computations, step 259 next expedites one or more computer displays, **graphics**, hardcopy, text, audio or other output, representing the initial route as computed along the waypoints input by the user. Such routes are represented as various forms of itinerary including: (1) annotated maps upon which the optimal routes are **graphically** marked, accentuated or highlighted; (2) lists of waypoints, or place names or geographic coordinates typically arranged in the order encountered. . . the optimal computed route indicating turning points, landmarks, navigation aids, signposts etc. along the computed route also typically arranged in **temporal** order of travel; (4) one or more POIs or preferably one or more ordered sets of waypoints or route nodes. . .

DETDESC:

DETD(124)

As . . . FIGS. 5, 6A and 6B, step 467 in FIG. 4 readjusts the radius or, more generally, the size of the **area** around intersections or nodes along a computed route within which the travel planning utility looks for POIs as topics for multimedia presentations. This technical

process of resetting the geographic **area** to be searched for multimedia POIs comprises a substantial multimedia operation for combination with routing insofar as readjustment of the radius or POI search **area** impacts on a map **display** also exhibiting route output. Resetting the radius or the size of the region searched for POIs impacts on route **display**/output substantially whenever it causes POIs to be added or deleted from the map **display** and the related POI list as detailed in relation to FIGS. 5, 6A and 6B.

DETDESC:

DETD(130)

Along . . . lengthy time period, at the user's option. In the alternative, the user can attach multimedia selections about locations appearing in **windows** superimposed upon map/route displays as illustrated at 162 and 165 in FIG. 1-0. These can also be printed out in.

DETDESC:

DETD(139)

More specifically, 501 in the upper left of FIG. 5 shows a simplified map **display**. Such map displays appear on the computer screen serving as a graphic interface in practically all modes of operation and various embodiments of the present invention. The map **display** in 501 is centered upon a location named PLACE, for purposes of this illustration, situated in between SOUTH PLACE and . . . labels on maps are visually associated with a located symbol, such as a dot or political subdivision boundaries or colored **area** on the map. No such graphic symbols are associated with the underlined place names in the 501 illustration, however, in.

DETDESC:

DETD(157)

FIG. 5C at 576 shows a third behind the screen data **configuration** for the transformation of routing output and waypoint input in lists of nearby POIs; for subsequent multimedia presentations controlled by. . . a custom or irregular polygon 588. Such odd polygons can be manually drawn by the user, employing known technologies for **graphic** input, or derived from alternate algorithms for relating computed routes or specified waypoints to surrounding POIs. For example, in the.

DETDESC:

DETD(187)

The MAP'N'GO (TM) July 1994 release automatically displays literal nonvocalized text as words printed typically in a **window** over the map display on screen only in the event that no sound or pictures are available relating to the. . . and instrument panel, under some circumstances, in vehicle users opt for having a passenger monitor literal text and pictures in **windows** on the map display, electing to turn the sound off to facilitate conversation or for enjoyment of silence or listening.

DETDESC:

DETD(195)

This . . . to engage in manipulation or adjustment of the multimedia output/display. This means that the map display and related text



information **window** remain in place focusing on the current POI while the user engages in activities such as resetting the time period for text or visual displays, or resizing or repositioning text or picture **windows** covering part or all of the map display, or modification of waypoint lists or the attachment of information to travel. . . .

DETDESC:

DETD(199)

FIG. . . . 8B. The Stop button brings multimedia operations to a halt at 872, cleaning up any text or pictures presented in **windows** on top of the map display in 876. The Stop button takes the user back to the POI listbox which. . . .

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(FILE 'USPAT' ENTERED AT 14:10:54 ON 13 JUN 1999)

L1 21348 S DISPLAY (P) LIMITED  
L2 5546 S DISPLAY (P) PARTIAL  
L3 40083 S DISPLAY (P) AREA  
L4 15951 S CONTENT (P) VIEW?  
L5 6523 S CONFIG? (P) GRAPHIC?  
L6 1946 S TEMPOR? (P) GRAPHIC?  
L7 51 S S LOAD? (P) DISPLAY  
L8 21412 S LOAD? (P) DISPLAY  
L9 1320 S L1 AND L2  
L10 25574 S L1 OR L2  
L11 9696 S L10 AND L3  
L12 343 S L11 AND L4  
L13 22281 S L4 OR L5  
L14 330 S L6 AND L8  
L15 44 S L14 AND L13 AND L11  
L16 913 S BROWSER  
L17 0 S L16 AND L15  
L18 178 S HYPERMEDIA  
L19 0 S L18 AND L15  
L20 110308 S WEB  
L21 0 S L20 AND L15  
L22 6 S L16 AND L14  
L23 0 S L18 AND L14  
L24 5 S L20 AND L14  
L25 3593 S INTERNET  
L26 12 S L25 AND L14  
L27 1 S L25 AND L15  
L28 163797 S WINDOW?  
L29 16 S L22 OR L24 OR L26  
L30 13 S L29 AND L28  
L31 1 S L30 AND L27  
L32 124 S L14 AND L13  
L33 10 S L32 AND L29  
L34 8 S L33 AND L28  
L35 25901 S 345/CLAS OR 707/CLAS  
L36 11051 S TEMPOR? (P) DISPLAY  
L37 6732 S LOAD? (P) GRAPHIC?  
L38 12063 S L36 OR L6  
L39 6778 S L7 OR L37  
L40 606 S L39 AND L38  
L41 310 S L40 AND L35  
L42 884 S L13 AND L11  
L43 43 S L42 AND L41  
L44 114114 S BROWSER OR HYPERMEDIA OR INTERNET OR "TCP/IP" OR HYPORTE  
XT  
L45 2 S L44 AND L43

=> d 1-

1. 5,877,766, Mar. 2, 1999, Multi-node user interface component and method thereof for use in accessing a plurality of linked records; Cary Lee Bates, et al., 345/357, 356, 973 [IMAGE AVAILABLE]

2. 5,523,769, Jun. 4, 1996, Active modules for large screen displays;

> d kwic 1-

US PAT NO: 5,877,766 [IMAGE AVAILABLE]  
US-CL-CURRENT: 345/357, 356, 973

L45: 1 of 2

ABSTRACT:

A user interface component and method of using the same **graphically** display linked records with node display elements representing individual records, and optional link display elements representing the links therebetween. The . . . a node display element, a new node display element is generated. In addition, the user interface component may further be **configured** to **graphically** represent the particular location of a particular link within a record, as well as a scroll display element associated with. . . specific data or locations within the records associated therewith may be accessed. Moreover, the user interface component may also be **configured** to incorporate a retrieve progress display element that indicates a current status of a retrieve operation for a record. Individual. . . criteria, among others. The user interface component may also be utilized to perform common operations such as printing, caching and **loading**, among others, on selected records in response to user selection of the nodes associated with the selected records.

SUMMARY:

BSUM(11)

A . . . such as a local area network (LAN) or wide area network (WAN), and/or on a public network such as the **Internet**. The amount of data stored on these additional sources is often too substantial for access with a conventional directory tree, . . .

SUMMARY:

BSUM(24)

Consistent with another aspect of the invention, a user interface component may further be **configured** to **graphically** represent the particular location of a particular link within a record. This additional information enables an end user to quickly. . .

SUMMARY:

BSUM(26)

Consistent with an additional aspect of the invention, a user interface component may also be **configured** to incorporate a retrieve progress display element that indicates a current status of a retrieve operation for a record. By **graphically** associating the retrieve progress display element with a node and/or link display element, the status of a retrieve operation may. . .

DETD(3)

DETD(3)

One application of a map **display** is in navigating **hypertext** documents stored locally on an end user's computer, on a private network such as a local **area** network (LAN) or wide **area** network (WAN), and/or on the **Internet** or other public network. Consequently, in such an application, the node **display** elements typically represent **hypertext** documents, while the link **display** elements typically represent the actual **hypertext** links between such documents. The **hypertext** documents may be, for example, in **hypertext** markup language (HTML) format, and may include text as well as various multimedia objects such as static and/or moving images, sounds, animations, etc. Further, the **hypertext** documents may include executable objects such as Java applets, controls such as Java Beans and Active X controls, scripts such as Javascript scripts, etc. The node **display** elements may represent only HTML-format documents, with any multimedia or executable objects contained therein considered to be part of the same documents. Alternatively, multimedia and/or executable objects may be embodied in separate node **display** elements, whereby the references to such objects in HTML-format documents would also operate as links and be embodied in separate link **display** elements.

DETD(4)

DETD(4)

While the disclosure shall hereinafter describe the use of map displays for representing and/or navigating linked **hypertext** documents, it should be appreciated that the invention may have benefit in other applications to access (e.g., view, store, modify,. . .

DETD(5)

DETD(5)

When used in conjunction with navigating **hypertext** documents, a map display is typically generated dynamically, whereby node display elements are automatically added to the map display as. . . an end user as he or she navigates through various records. Given the practically endless

amount of content on the **Internet**, for example, the history provided by a map display may be invaluable.

DETDESC:

DETD(6)

Another . . . functionality as scroll bars for navigating through the contents of their associated records. When a separate display such as a **browser** window is activated for displaying the contents of a given document, a slider disposed within a region of the associated node display element may be utilized to scroll the **browser** window through the contents of the document. Moreover, a slider may be utilized to navigate to different documents, e.g., by. . .

DETDESC:

DETD(11)

A . . . represent practically any type of networked interconnection, including but not limited to local-area, wide-area, wireless, and public networks (e.g., the **Internet**). Moreover, any number of computers and other devices may be networked through network 18, e.g., multiple servers. Furthermore, it should. . .

DETDESC:

DETD(18)

Each map manager 30 also utilizes a map registry 34 that maintains operational information regarding the active map displays 60. A **browser**, or **browser** window, may be considered to include any display component suitable for "browsing" or viewing the contents of a linked record. For example, a suitable **browser** may be based upon the Navigator **web browser** from Netscape Communications, or the **Internet Explorer web browser** from Microsoft. In addition, each **browser** 36 may be a separate application, or may be a separate window of a single application, as is well known in the art. Generally, a **browser** 36 is open for each active slider 1..m on the active map display 60 for the client. Each **browser** open for a particular map display may be referred to as a "user" of the map display.

When used to represent HTML documents, node **display** element objects may be **limited** only to HTML-format documents, where any additional multimedia or executable objects, such as static and/or moving images, sounds, animations, Java. . . and thus not separately accessible. In the alternative, such multimedia and/or executable objects may themselves be represented by separate node **display** element objects and displayed as node **display** elements in a map **display**, whereby the objects are separately accessible. In such circumstances, it may be desirable to separately indicate the type of object through a visual, color, icon, or alphanumeric representation on the map **display**. It should be appreciated that the **display** of such objects may also be at the end user's option.

DETDDESC:

DETD(58)

The . . . software environment of FIG. 4 is illustrated in FIGS. 5-8, which respectively illustrate the program flow during creation for a **browser** 36, map registry 34, map manager 30 and map display 60. As discussed above, the illustrated environment is an event-driven. . .

DETDDESC:

DETD(59)

For example, a **browser** is typically implemented in a window that typically receives events such as "minimize window", "maximize window", "resize window", "close window",. . .

DETDDESC:

DETD(60)

As illustrated in FIGS. 5-8, **browser** 36 executes a main routine 100, map registry 34 executes a main routine 150, map manager 30 executes a main. . .

DETDDESC:

DETD(62)

A . . . to FIG. 5, a request to create a new map display generates a create map event, which is received by **browser** 36 (e.g., represented by block 102), and thereby initially handled by a handling routine starting at block 104.

DETDDESC:

DETD(63)

In . . . includes information regarding the name of the map to be displayed. A new map display is needed when no other **browser** on the client is using the map, but is not needed when a map display is already opened on the. . .

DETD(235)

As . . . user interface component to scroll through the contents of the window. In this embodiment, the link may be an internal **hypertext** link, or may be a system generated link, e.g., between pages, screens, chapters, sections, etc.

CLAIMS:

CLMS(2)

2. A method of **graphically** representing on a computer display a plurality of linked records, the method comprising:
- (a) displaying a plurality of node display. . . are respectively associated with a pair of records that are linked to one another, the pair of node display elements **graphically** linked with one another; and
  - (b) displaying a control element on a selected one of the node display elements, the control element **configured** to navigate between first and second locations within the record associated with the selected node display element in response to. . .

CLAIMS:

CLMS(3)

3. A method of graphically representing on a computer display a plurality of **hypertext** documents, the method comprising:
- (a) displaying first and second node display elements, each of which is respectively associated with first and second **hypertext** documents, the second node display element graphically linked with the first node display element to represent a **hypertext** link in the first **hypertext** document to the second **hypertext** document;
  - (b) displaying a scroll display element on the first node display element, the scroll display element indicating a selected location within the first **hypertext** document;
  - (c) displaying at least a portion of the contents of the first **hypertext** document proximate the selected location in a window;
  - (d) selectively scrolling the window through the contents of the first **hypertext** document in response to user manipulation of the scroll display element within the first node display element; and
  - (e) displaying the contents of the second **hypertext** document in the window in response to user manipulation of the scroll display element from the first node display element. . .

CLAIMS:

CLMS(5)

5. The method of claim 1, wherein the plurality of linked records includes **hypertext** linked documents.

CLAIMS:

CLMS(6)

6. The method of claim 5, wherein the plurality of linked records includes **hypertext** markup language (HTML) documents.

CLAIMS:

CLMS (19)

19. The method of claim 18, wherein the window is a **browser**.

CLAIMS:

CLMS (41)

41. A user interface component **configured** to display on a computer display a **graphic** representation of a plurality of linked records, the user interface component comprising:

- (a) a plurality of node display elements, wherein. . . are respectively associated with a pair of records that are linked to one another, the pair of node display elements **graphically** linked with one another; and
- (b) a scroll display element defined on a selected one of the node display elements, the. . .

CLAIMS:

CLMS (42)

42. A computer system **configured** to display a **graphic** representation of a plurality of linked records, the computer system comprising:

- (a) a computer display; and
- (b) a processor **configured** to display on the computer display a plurality of node display elements, wherein each of which is associated with a. . . are respectively associated with a pair of records that are linked to one another, the pair of node display elements **graphically** linked with one another; and to display a scroll display element on a selected one of the node display elements,. . .

CLAIMS:

CLMS (43)

43. A program product comprising:

- (a) a program **configured** to perform a method of **graphically** representing on a computer display a plurality of linked records, the method comprising displaying a plurality of node display elements,. . . are respectively associated with a pair of records that are linked to one another, the pair of node display elements **graphically** linked with one another; and to display a scroll display element on a selected one of the node display elements,. . .

CLAIMS:

CLMS (56)

56. A user interface component **configured** to display on a computer display a **graphic** representation of a plurality of records including first and second records, wherein the first record includes a link to the. . .

- first and second node display elements respectively associated with the first and second records; and
- (b) a link display element that **graphically** links the first and second node display elements, the link display element at least partially overlapping the first node display. . .

CLAIMS:

CLMS (57)



57. A computer system **configured** to display a **graphic** representation of a plurality of records including first and second records, wherein the first record includes a link to the second record, the computer system comprising:

- (a) a computer display; and
- (b) a processor **configured** to display on the computer display first and second node display elements, the first and second node display elements respectively associated with the first and second records, and to display on the computer display a link display element that **graphically** links the first and second node display elements, the link display element at least partially overlapping the first node display.

CLAIMS:

CLMS(58)

58. A program product comprising:

- (a) a program **configured** to perform a method of **graphically** representing on a computer display a plurality of records including first and second records, wherein the first record includes a . . . and second node display elements respectively associated with the first and second records; and displaying a link display element that **graphically** links the first and second node display elements, the link display element at least partially overlapping the first node display.

US PAT NO: 5,523,769 [IMAGE AVAILABLE]  
US-CL-CURRENT: 345/1, 903

L45: 2 of 2

ABSTRACT:

High . . . memory distributed across the modules, and through the transmission of structured data, including compressed images, compressed video, sampled data and **graphics** primitives, permitted by the provision in each module of a processor which converts structured data to images. The use of modules with internal processing also permits driving displays of differing **configurations**, such as oblong, trapezoidal and even circular displays, or even driving displays with irregular surfaces. As a further result of. . .

SUMMARY:

BSUM(7)

Because of bus limitations, when such a large wall-size **display** is to be driven by a central processing unit (CPU) which serves as a video source generator for the **display**, it takes tens of minutes to provide or "paint" the image across the **display**. This is because all of the individual pixels are addressed through a speed-limited network or communications channel between the source of video images and the passive modules used to drive different segments of the **display**.

SUMMARY:

BSUM(9)

Driving all of the above modular displays is painfully slow due to the

BSUM(19)

In an attempt to overcome the lengthy amounts of time required to update a display, accelerators have been provided, which off-loads from the CPU some of the computation required to paint **graphics** and sampled images. However, accelerators do not solve the problem of transmitting massive amounts of data to a high pixel. . .

SUMMARY:

BSUM(21)

However, this again does not solve the problem of driving a large **area display** from the server, because the massive amount of pixel data must nonetheless be transmitted from the server to the **display** over a bandwidth **limited** bus.

DETDESC:

D

DETD(61)

Additionally, . . . show alternative to user topologies. A very large display application could alleviate some of these problems by showing the base **view** of the system, with separate windows showing relevant information or current activities. Unlike fixed panels, displays with active modules are not restricted in size, location, type of information, or **content** of information, but can appear anywhere appropriate for system control functions.

DETD(DESC:

DETD(62)

A third application for active module based large scale electronic canvasses is the **area** of visual databases. There is a present concern in the industry as to how to represent information from databases including. . . visual information and the visual relationships among objects in the databases. Examples include key-frame indexes into movies. Spatial representation of **temporal** data such as audio tracks, and **hypertext** systems which show linkages among documents in an overview. In all of these, the principal idea is that the eye, . . . of information. Conventional displays simply do not hold enough information to exploit these techniques; but a very large, high resolution **display** can accomplish these tasks.

DETD(DESC:

DETD(63)

Finally, in the **area** of presentation systems, a very large wall mounted **display** is extremely useful in modern seminar presentation rooms. With sufficient resolution, the **display** can replace the white board, slide and transparency projectors, and video systems all at once. The presenter could use a. . . he proceeds with the main part of the presentation. Using a so-called electronic chalk, the presenter could write on the **display** or annotate the information in window, with this information being preserved as the windows move. The scalability of windows would. . .

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(FILE 'USPAT' ENTERED AT 14:10:54 ON 13 JUN 1999)
L1      21348 S DISPLAY (P) LIMITED
L2      5546 S DISPLAY (P) PARTIAL
L3      40083 S DISPLAY (P) AREA
L4      15951 S CONTENT (P) VIEW?
L5      6523 S CONFIG? (P) GRAPHIC?
L6      1946 S TEMPOR? (P) GRAPHIC?
L7      51 S S LOAD? (P) DISPLAY
L8      21412 S LOAD? (P) DISPLAY
L9      1320 S L1 AND L2
L10     25574 S L1 OR L2
L11     9696 S L10 AND L3
L12     343 S L11 AND L4
L13     22281 S L4 OR L5
L14     330 S L6 AND L8
L15     44 S L14 AND L13 AND L11
L16     913 S BROWSER
L17     0 S L16 AND L15
L18     178 S HYPERMEDIA
L19     0 S L18 AND L15
L20     110308 S WEB
L21     0 S L20 AND L15
L22     6 S L16 AND L14
L23     0 S L18 AND L14
L24     5 S L20 AND L14
L25     3593 S INTERNET
L26     12 S L25 AND L14
L27     1 S L25 AND L15
L28     163797 S WINDOW?
L29     16 S L22 OR L24 OR L26
L30     13 S L29 AND L28
L31     1 S L30 AND L27
L32     124 S L14 AND L13
L33     10 S L32 AND L29
L34     8 S L33 AND L28
L35     25901 S 345/CLAS OR 707/CLAS
L36     11051 S TEMPOR? (P) DISPLAY
L37     6732 S LOAD? (P) GRAPHIC?
L38     12063 S L36 OR L6
L39     6778 S L7 OR L37
L40     606 S L39 AND L38
L41     310 S L40 AND L35
L42     884 S L13 AND L11
L43     43 S L42 AND L41
L44     114114 S BROWSER OR HYPERMEDIA OR INTERNET OR "TCP/IP" OR HYPORTE
XT
L45     2 S L44 AND L43
L46     43 S LOAD? (P) GRAPHIC? (P) DISPLAY (P) TEMPOR?
L47     30 S L46 AND L35
L48     17518 S LOAD? (P) CONTENT
L49     5 S L48 AND L47
L50     2273 S ANIMA? (P) GRAPHIC?
L51     0 S L50 AND L49
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=> s 150 and 148

L52

37 L50 AND L48

=> s 152 and 140

L53

5 L52 AND L40

=> s 153 and 135

L54

4 L53 AND L35

=> d 1-

1. 5,801,676, Sep. 1, 1998, Image display apparatus for processing graphics instructions from a storage device; Toshihiro Maruyama, et al., 345/123 [IMAGE AVAILABLE]

2. 5,760,771, Jun. 2, 1998, System and method for providing structured tours of hypertext files; Greg E. Blonder, et al., 345/336, 302, 329, 356; 434/118; 705/26 [IMAGE AVAILABLE]

3. 5,467,459, Nov. 14, 1995, Imaging and graphics processing system; Thomas Alexander, et al., 711/153; 345/514, 526; 364/246.3, 255.8, 940.3, 966.4, DIG.1, DIG.2; 711/173, 202 [IMAGE AVAILABLE]

4. 4,266,253, May 5, 1981, Processor for a graphic terminal; Philippe Matherat, 358/425; 345/24, 27, 516; 348/552 [IMAGE AVAILABLE]

=> d kwic 1-

US PAT NO: 5,801,676 [IMAGE AVAILABLE]  
US-CL-CURRENT: 345/123

L54: 1 of 4

SUMMARY:

BSUM(23)

Processing of other instructions will be explained below. Many of CD **graphics** softwares available in the market comprise numerous multi-recorded instructions, such as Preset Memory instruction, Preset Border instruction, and **Load** CLUT (Color Look Up Table) instruction. The Preset Memory instruction is used for fully coloring one screen by a designated. . . lack of some data lost by error. The Preset Border instruction is used for fully coloring the border region. The **Load** CLUT instruction is used to change the color arrangement of the color palette.

SUMMARY:

BSUM(36)

Accordingly, the second and third aspects of the present invention enable an external memory device to memorize the images of CD **graphics** as perfect static or dynamic images (**animation**) of digital form.

SUMMARY:

BSUM(39)

A fifth aspect of the present invention provides an image display apparatus processing **graphics** instructions stored in a compact disc, the apparatus comprising: memory means for memorizing color data presently displayed on a screen; . . . memorized in the memory means,

when the newly entered instruction is any of Preset Memory instruction, Preset Border instruction, and Load CLUT instruction, for canceling a processing of the newly entered instruction when the color information of the newly entered. . .

SUMMARY:

BSUM(40)

In . . . the fifth aspect of the present invention adequately omits the processing of the newly entered Preset Memory/Border instructions or the Load CLUT instruction when the color conditions are the same as those of the previous one. It is advantageous when the CD **graphic** display apparatus has a poor ability in the data processing.

DETDESC:

DETD(40)

FIG. . . . the format conversion module 9. The second embodiment is characterized in that the timing of the transferring operation of the **graphic** data is occasional and therefore the **graphic** image received by the external memory device 10 is a static image. However, there will be a demand for memorizing the **graphic** image data as dynamic images (**animation**). To realize this, the modified embodiment of the second embodiment provides the time administration module 11. More specifically, the time. . . a transfer command to the format conversion module 9 every predetermined intervals. Hence, the format conversion module 9 transfers the **graphic** data whose format is adequately converted to the external memory device 10 at predetermined intervals, thereby memorizing **graphic** data as dynamic images (**animation**). In addition to the **graphic** data, the external memory device 10 receives time data relating to a data fetch interval and a fetch time.

DETDESC:

DETD(72)

FIG. 11 shows a CD **graphics** image processing apparatus in accordance with the third embodiment of the present invention. In FIG. 11, the CD drive 1. . . to the control module 2 to analyze the detailed content of subcodes R through W. When a command for CD **graphics** (i.e. CDG command) is involved, the subcode data recorded in the format shown in FIG. 2, succeeding this command, is read out. Then, the internal memory 8 develops or describes the **graphic** image information on the basis of the instruction and succeeding data. The **graphic** image information developed in the internal memory 8, as digital data, is transferred into the **display** VRAM 3 and then sent to the **display** circuit 4 wherein the **graphic** data is converted into video signals to be displayed on the **display** unit 5. Furthermore, the third embodiment CD **graphics** image processing apparatus comprises a data storage buffer 12 which is connected to the control module 2 to temporarily store the subcode data read out from the CD **graphics** by the CD drive 1.

DETDESC:

DETD(146)

On . . . S25 to make a judgement as to whether any of the Preset Memory instruction, the Preset Border instruction and the Load CLUT instruction are included. If none of the Preset Memory instruction, the Preset Border instruction and the Load CLUT instruction are found ("NO" in the step S25), the control module 2 proceeds to a step S26 to execute other **graphics** processing according to the readout

instruction, and then returns to the step S22.

DETDESC:

DETD(159)

Thus, the color information memory 13 memorizes the **content** of "t1: Load CLUT0 instruction" (00, 00, 00, 01, 01, 01), the **content** of "t2: Load CLUT1 instruction" (08, 08, 08, 09, 09, 09), developed color of "t3: Preset Memory instruction" (01), and developed color of.

DETDESC:

DETD(161)

Next, at the address "t9", the **Load CLUT0** instruction is newly entered. However, the **content** of the instruction is the same (00, 00, 00, 01, 01, 01) as that of the already memorized **Load CLUT 0** instruction. Thus, this instruction is neglected. Similarly, the **Load CLUT 1** instruction newly entered in the address "t10" has the same **content** (08, 08, 08, 09, 09, 09) as that of the already memorized **Load CLUT 1** instruction; therefore, this instruction is neglected too.

DETDESC:

DETD(162)

In . . . the fourth embodiment of the present invention adequately omits the processing of the newly entered Preset Memory/Border instructions or the **Load CLUT** instruction when the color conditions are the same as those of the previous one. It is advantageous when the CD **graphic** display apparatus has a poor ability in the data processing.

US PAT NO: 5,760,771 [IMAGE AVAILABLE] L54: 2 of 4  
US-CL-CURRENT: 345/336, 302, 329, 356; 434/118; 705/26

SUMMARY:

BSUM(5)

A hypertext file is **loaded** and displayed on a user's computer by software called a browser. A **loaded** and displayed hypertext file is called a page. Almost every hypertext file contains at least one link that is usually presented on a page by textual or **graphic** information.

SUMMARY:

BSUM(17)

The . . . tour service page, which lists the available tours as links. The links may be represented by one or more of **graphic**, audio, text, video and **animation** components. A tour may be experienced by a user alone, or along with other users. Users on a multi-user tour. . .

SUMMARY:

BSUM(21)

If . . . can skip that page and continue on seamlessly. A page may be unavailable because the server from which it is **loaded** is broken or disconnected from the network. The tour may display the page later in the tour if it becomes. . . page is anticipated, the tour will display

Best Available Copy  
predetermined padding information, the guide will provide padding, or both. Padding is predetermined content, usually of a general nature, that may be inserted seamlessly anywhere in a tour. For example, padding in an education. . . . This discussion may consist of graphs and charts accompanied by narration. A page may be delayed because it must be loaded from a server that is overburdened and slow.

DETDESC:

DETD(28)

If the user indicates he wants to explore independently, the user may temporarily leave the tour and select links on his own and display pages independently of the tour 116 (FIG. 10). This may even involve leaving the Yale website.

DETDESC:

DETD(35)

In . . . time to display, the tour may provide predetermined padding material to keep the user entertained while the page is being loaded. This padding may take the form of audio remarks, video clips, graphics, textual material, animation, or any combination thereof.

DETDESC:

DETD(36)

An . . . predetermined time T, padding is displayed 133. This padding may take the form of at least one of video, audio, graphic, textual or animated components generated from the guide, on a page, or both. The padding is stored in segments. After displaying a padding. . .

CLAIMS:

CLMS(2)

2. . . . clients through said network. said data comprising at least one form of information selected from the group of audio, text, graphic, video and animation.

CLAIMS:

CLMS(4)

4. . . . a tour representation, said tour representation comprising at least one form of information selected from the group of audio, text, graphic, video and animation.

US PAT NO: 5,467,459 [IMAGE AVAILABLE] L54: 3 of 4  
US-CL-CURRENT: 711/153; 345/514, 526; 364/246.3, 255.8, 940.3,  
966.4, DIG.1, DIG.2; 711/173, 202

SUMMARY:

BSUM(20)

The . . . includes the steps of obtaining the addressed data from a main memory if the line tag does not match the content of the line register. If no match occurs, the addressed data is obtained from the main memory, and loaded into the data cache. A line tag from the data address is then loaded into a line register; the line register is identified by a line index from the address. In a preferred embodiment, .



## SUMMARY:

BSUM(24)

In . . . next-entry field. The increment table is connected to the adder so as to transmit as input to the adder the **content** of an increment field for a current subpattern entry. Finally, the controller initially **loads** a base address into the base address register and **loads** the increment table with values for a particular pattern. During operation, the controller causes the base address register to receive. . .

DETDESC:

DETD(23)

At block 104, if the line tag does not match the **content** of the selected line register, or if the valid bit is not set (implying that the data is invalid) a. . . memory at a block 110. When the data are returned to the cache, at a block 112 the data are **loaded** into the data register corresponding to the line index, e.g., the line is filled. A portion of the memory address. . .

DETDESC:

DETD(60)

The **graphics** subsystem 18 is the primary agent for maintaining and drawing an image, and also for generating realistically-shaded three-dimensional images from scene descriptions. In one actual embodiment, the **graphics** subsystem 18 comprises a parallel-pipelined architecture capable of providing a **graphics** performance of about 200,000 Gouraud shaded polygons/sec. The display component supports 24-bit full color images, and double frame buffers are incorporated to support smooth **animation**. The host interface provides a 20 Mbytes/sec data transfer rate between the imaging and **graphics** processing system 10 and a connected host computer.

DETDESC:

DETD(64)

The **graphics** subsystem utilizes the two high speed buses 16 to store and **load** data to and from the shared memory 14. One of the high speed buses is used to **load graphics** data from the shared memory 14 to the polygon processing pipelines 10. The other bus is used to transfer the image data, program and any control information between the shared memory 14 and the host interface 28 and the **graphics** processor 172.

DETDESC:

DETD(65)

With . . . 32, which is located at the front end of the processing pipelines 30, is responsible for the communication between the **graphics** engine 24 and the shared memory 14. In one actual embodiment, the head processor predicts the total amount of processing power, or **load**, required for rendering the given scene and divides it such that all pipeline stages have equivalent **loads** thereby increasing overall processing efficiency. The head processor uses an 8K.times.64 SRAM 186 as its local memory to store its. . . two pipelines comprise identical hardware and firmware, the system can be readily redesigned for higher or lower performance of the **graphics**

engine by increasing or decreasing the number of pipelines, or by altering the number of processor contained within each pipeline.

DETDDESC:

DETD(68)

In . . . the large main shared memory available to the entire system), accessible only by each of the polygon processors. The various **graphic** software routines needed to perform the four primitive **graphics** processing functions are stored in the local shared memory 194. Additionally, each of the polygon processors can utilize the shared memory space to store **temporary** values during processing. Because all of the **graphics** routines are commonly accessible from the local shared memory 194, each polygon processor may be dynamically assigned different tasks or. . . permanently dedicated to a particular task or subtask. Also, by maintaining the FIFO linkage between the polygon processors, the overall **graphics** processing is speeded up, since each polygon processor does not have to write to and read from local shared memory. . . obtain polygon information from its predecessor. By reducing the number of read and write operations to the local shared memory, **graphics** processing speed is increased.

DETDDESC:

DETD(69)

As noted, an advantage is gained by utilizing the local shared memory and by exploiting the sequential ordering of the **graphics** processing tasks to dynamically assign the tasks to each pipeline stage in a **load** balanced manner. At a high level, each polygon is rendered after the four basic **graphics** tasks are completed. Each task can be broken down into a series of subtasks, each of which is performed sequentially. . . each pipeline stage uniformly. For each polygon, the head processor evaluates the total number of the processing cycles and the **load** boundaries between pipeline stages to balance the processing requirements. This **load** balancing is very dynamic because the number of vertices varies from polygon to polygon and the number of light sources. . .

DETDDESC:

DETD(73)

A similar **load** balancing process can be utilized for any set of sequential tasks that can be broken up into subtasks, and whose task processing costs depend on identifiable variables. Utilizing the shared memory and FIFO-linking configuration, as well as the **load** balancing algorithm, the present **graphics** processor access and processes ,**graphics** data in an efficient manner.

US PAT NO: 4,266,253 [IMAGE AVAILABLE]  
US-CL-CURRENT: 358/425; 345/24, 27, 516; 348/552

L54: 4 of 4

DETDDESC:

DETD(26)

level) for inhibiting the video

output signal of the image memory  
outside the space corresponding to  
the **graphic** image.

##STR9##

0

Signal which at its low level enables  
the output of the image memory to. . . ##STR12##

the content of an addressed register  
to be transferred to the bus MPDB.

##STR13##

I

**Temporal** exchange signal active at the  
low level.

##STR14##

O

Interruption request signal, output  
by open collector.. . .

DETDESC:

DETD(108)

The writing pointer enables a space of 4096.times.4096 discrete dots to be addressed. It is accessible in the writing mode (**loading**) and in the reading mode for the internal bus PXDB of the processor. The **content** of the counters X and Y may be cleared by the command signals CL.multidot.Y.multidot.REGIST and CL.multidot.X.multidot.REGIST. Each of the counters CNT may be **loaded** by command signals LX and LY and may be read under the action of the command signals R.multidot.X and R.multidot.Y.. . . may be directly multiplexed by means of operators 100 and 101 of the "OR"-type. It is necessary to check the **content** of the upper parts of these counters in order to prevent writing into the image memory when the addressed space is above the space of the **graphic** image. To this end, a logic operator 103 of the "OR"-type recognises whether the values of the high parts of. . . is outside the screen, depends on the signal FMAT which is at the high level when the format of the **graphic** image is 512 dots. This output state is modified by the operator 104 of the "AND"-type which, at a first. . .

DETDESC:

DETD(130)

FIGS. . . . address signals MPAB and the data signals MPDB. FIG. 21a shows the wave form of the signals corresponding to a **loading** operation, MPR/W at the low level. FIG. 21b shows the wave form of the signals corresponding to an operation in which the **content** of the registers is transferred to the bus MPDB. FIG. 21c shows a particular signal ISTR. This signal is a. . . signal ISTR is intended where necessary for an external register for particular applications, such as the display of a coloured **graphic** image.

DETDESC:

DETD(194)

The . . . of the inverter type, whilst the section B may be initialised at the low level. The "erasing command" signal asynchronously **loads** this counter to the state "01" if the signal FMAT is at the low level and to the state "02". . . the state of the counter is different from the state "11". The counter runs on the falling edge of the "**graphic** image frame" signal (output L.8 of the vertical counter of the control unit). A trigger circuit of the D-type records. . .

DETDESC:

DETD(195)

The . . . "read-modify-write" mode during the periods where the processor operates in the reading/display mode, the frame(s) will be displayed, enabling the **animated** drawing to be made at a maximal speed by writing the new drawing when the signal L.8 (**graphic** image frame) is at the high level and by triggering the erasing operation prior to the beginning of the frame. . .

CLAIMS:

CLMS (5)

5. . . . claimed in claim 1, characterised in that the writing pointer is formed by two synchronous up/down registers comprising means for **loading** the means for indicating the overflow, means for clearing the **content**, means for reading the **content** and means for controlling the counting direction.